On Incomplete Mutations in Breton

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1. Incomplete mutations

Among the distinctive characteristics of the Celtic languages are their elaborate systems of grammatically conditioned word-initial consonant mutations. Breton, for example, possesses four principal mutations, according to the native grammatical tradition: these are the spirantizing, the reinforcing, the leniting, and the mixed mutations. In a particular syntactic context, the initial consonant of a word may undergo one or another of these mutations, ordinarily as a consequence of the influence of some immediately adjacent mutation 'trigger'. Thus, the possessive pronoun e 'his' lenites the initial consonant of the noun which follows it, as in the examples in (1).

(1)	Lenition:	p → b		penn 'head', e benn 'his head'
		t → d		tad 'father', e dad 'his father'
		k → g		kador 'chair', e gador 'his chair'
		b → v		breur 'brother', e vreur 'his brother'
		d → z		dant 'tooth', e zant 'his tooth'
		g → c'h (= [ɦ])		gavr 'goat', e c'havr 'his goat'
		gw → w		gwele 'bed', e wele 'his bed'
		m → v		mamm 'mother', e vamm 'his mother'

Similarly, the possessive pronoun va 'my' spirantizes the initial consonant of the noun which follows it, as in the examples in (2).

(2)	Spirantization:			
		p → f		penn 'head', va fenn 'my head'
		t → z		tad 'father', va zad 'my father'
		k → c'h (= [x])		kador 'chair', va c'hador 'my chair'

(Strictly speaking, spirantization should be viewed as converting voiceless stops into voiceless fricatives; the latter, however, may subsequently undergo a phonological rule which voices initial fricatives after resonants. The effects of the latter rule are often simply regarded as an integral part of the spirantization process, since all of the spirantization triggers in Breton end in resonants. The contexts in which the fricative voicing rule applies vary dialectally; in the orthography of standard literary Breton, t is the only initial consonant whose spirant alternant is explicitly represented as voiced. See Jackson (1967: 360-375) and Willis (1982: 24f, 114ff) for discussion.)

In traditional grammars of Breton, certain expressions are claimed to trigger incomplete mutations; an incomplete mutation is just like one or another of the principal mutations except that it apparently affects a smaller range of consonants. For example, the first person singular enclitic pronoun 'm is, in many dialects, said to trigger an incomplete spirantization, in that it appears to spirantize t and k but not p:

(3) a.	kambr 'room'	(e 'in' + 'm →)	em c'hambr	'in my room'
	ti 'house'		em zi	'in my house'
but:	penn 'head'		em penn	'in my head'
b.	karout 'like'	(da 'to' + 'm →)	da'm c'harout	'to like me'
	treiñ 'turn'		da'm zreiñ	'to turn me'
but:	prenañ 'buy'		da'm prenañ	'to buy (for) me'

This pattern is typical of the standard literary dialect (Kervella (1947: 95)) and the Léon dialect (Vallée (1926: 69, fn 1), Hemon (1975a: 8)), and is reported as optional in other dialects (e.g. by Le Roux (1896: 8f), Trépos (n.d.[1968]: 46), and Vallée (1926: 79, fn 1)). In Trégorrois, however, 'm triggers the full range of spirantizations (Le Clerc (1911: 19), Le Roux (1896: 8ff)).

Despite this variation in the pattern exemplified in (3), other cases of incomplete mutation appear exceptionlessly in all dialects of the language. For example, when an article is immediately followed by a feminine singular noun (or by a masculine plural noun with human reference), the article apparently triggers the full range of lenitions except that of d to z:[1]

(4)	paner	'basket'	ar baner	'the basket'
	taol	'table'	an daol	'the table'
	kador	'chair'	ar gador	'the chair'
	bag	'boat'	ar vag	'the boat'
	gavr	'goat'	ar c'havr	'the goat'
	gwern	'mast'	ar wern	'the mast'
	mamm	'mother'	ar vamm	'the mother'
but:	delienn	'leaf'	an delienn	'the leaf'

Thus, in a formal analysis of Breton mutations, one might postulate the existence of a partial lenition rule (5b) alongside the full lenition rule (5a); and for those dialects other than Trégorrois, one might postulate a partial spirantization rule (6b) alongside the full spirantization rule (6a).

(5) a. Lenition:

$$\begin{bmatrix} -\text{son} \\ +\text{voi} \end{bmatrix} \rightarrow [+\text{cont}]$$

$$\begin{bmatrix} -\text{son} \\ -\text{cont} \end{bmatrix} \rightarrow [+\text{voi}]$$

$$\begin{bmatrix} +\text{nas} \\ +\text{ant} \\ -\text{cor} \end{bmatrix} \rightarrow [+\text{cont}]$$

} in leniting environments (cf. Willis (1982: 54f))

b. Partial lenition:

$$\begin{bmatrix} -\text{son} \\ -\text{cor} \\ +\text{voi} \end{bmatrix} \rightarrow [+\text{cont}]$$

$$\begin{bmatrix} -\text{son} \\ -\text{cont} \end{bmatrix} \rightarrow [+\text{voi}]$$

$$\begin{bmatrix} +\text{nas} \\ +\text{ant} \\ -\text{cor} \end{bmatrix} \rightarrow [+\text{cont}]$$

} after the articles [in certain contexts], ...

(6) a. Spirantization: [- voi] → [+ cont] in spirantizing environments (cf. Willis (1982: 57))

(6) b. Partial spirantization: $\begin{bmatrix} - \text{ voi} \\ \alpha \text{ ant} \\ \alpha \text{ cor} \end{bmatrix} \rightarrow$ [+ cont] after 'm, ...

Hereafter, I shall refer to this kind of analysis of incomplete mutations as the partial mutation (or PM) analysis.

2. Incomplete mutations as the effect of mutation reversal

Willis (1982: 119-121) has argued that in certain cases, expressions which have traditionally been analyzed as triggering incomplete mutations should in fact be viewed as triggering complete mutations; in such cases, she claims, the mutations only appear to be incomplete because some of their effects are reversed by low-level phonological rules.

Consider the class of nouns which includes both feminine singulars and masculine plurals with human reference (a class to which I shall henceforth refer as 'FS/MPH nouns'): nouns in this class ordinarily trigger a lenition in a following adjective, as in (7a-c); those which end with an obstruent, however, seemingly fail to trigger a lenition if the following adjective begins with a voiceless stop. Thus, the feminine singular nouns in (7d-f) apparently trigger an incomplete lenition (one which is distinct from that triggered by the definite article in (4)):

(7)	a.	paour	'poor'	ur vamm baour	'a poor mother'
	b.	tev	'thick'	ur wern dev	'a thick mast'
	c.	kaer	'fine'	ur gador gaer	'a fine chair'
	d.			ur vaouez paour	'a poor woman'
	e.			ur voest tev	'a thick box'
	f.			ur gazeg kaer	'a fine mare'

Willis suggests, however, that the apparent failure of lenition in examples such as (7d-f) should instead be viewed as the cumulative effect of lenition and either of two rules of Breton phonology:

(8) a. Obstruents are devoiced following voiceless obstruents.
b. Sequences of two voiced obstruents may optionally stay as they are or be mutually devoiced. (Willis (1982: 119))

In Willis' analysis, the combination of boest 'box' with tev 'thick' produces (7e) in two steps: first, lenition yields ur voest dev, which (8a) then converts to (7e). Similarly, the apparent absence of lenition in (7d,f) is regarded as the cumulative effect of lenition and rule (8b), respectively: ur kazeg kaer lenites to ur gazeg gaer, which (8b) then converts to (7f) (in which the final g in gazeg is voiceless, despite its spelling). In what follows, I shall refer to this sort of approach to incomplete mutations as the mutation reversal (or MR) analysis.

The MR analysis provides a satisfying alternative to the PM analysis in its account of the mutation pattern exemplified in (7). Willis has, however, suggested that two other apparent cases of incomplete mutation should likewise be treated as involving complete mutations whose effects are partially reversed by low-level phonological rules. I shall argue here that for these latter two cases, the MR analysis is poorly motivated.

Consider again the examples in (3) and the traditional view that 'm triggers an incomplete spirantization which leaves p unaffected. Willis rejects this view, proposing instead that 'm triggers the full range of spirantizations but that the mutation of p to f is subsequently reversed by an assimilative phonological rule converting f to p after m; according to her proposal, em penn derives from the underlying sequence e+'m penn by spirantization (→ em fenn) followed by assimilation.

Willis proposes a similar account of the apparently incomplete pattern of lenition exemplified in (4); that is, she suggests that the articles an, un trigger the full range of lenitions but that the mutation of d to z is ultimately reversed by an assimilation converting z to d after n. Thus, an delienn derives from the underlying sequence an delienn by lenition (→ an zelienn) followed by assimilation.

The plausibility of this account of the mutation patterns in (3) and (4) is, of course, entirely dependent on the extent to which one can justify postulating a phonological rule whose effect is to reverse the spirantization of p and the lenition of d. Willis does not explicitly formulate such a rule. (9), however, might be proposed as a rule achieving the desired effect; note that as (9) is stated, it must be ordered before the fricative voicing rule mentioned above if it is to reverse the spirantization of p in the intended manner.

(9) $$\begin{bmatrix} -\text{ son} \\ +\text{ ant} \\ \alpha\text{ cor} \\ \alpha\text{ voi} \end{bmatrix} \rightarrow [-\text{ cont}] \;/\; \begin{bmatrix} +\text{ nas} \\ +\text{ ant} \\ \alpha\text{ cor} \end{bmatrix} \quad \#\_\_\_\_$$

As it stands, rule (9) (hence, the MR analysis itself) turns out to be implausible for two reasons; moreover, it is not clear that (9) can be modified in such a way as to overcome these two difficulties, as I shall show in the following two sections.

3. A potential problem for the MR analysis: underlying initial f

If (9) is in fact a rule of Breton phonology, then it should apply not only to instances of f and z arising as the effect of a mutation--it should, in addition, apply to any underlying instance of initial f or z preceded by a homorganic nasal. This prediction is difficult to confirm (or to disconfirm) in the case of z, since only a vanishingly small number of words begin with an underlying z in Breton, and nearly all of these are obviously recent borrowings. Words with underlying initial f are nevertheless abundant, and it is clear that the initial f in such words does not become p when preceded by m; this is true whether the preceding expression is a spirantization trigger (as in (10)) or not (as in (11)).

(10) a. em fri 'in my nose', da'm frealziñ 'to console me'
b.(*)em pri (≠ 'in my nose'; = 'in my mud (pri)'), *da'm prealziñ

(11) a. en em flojenniñ 'to find shelter' (en em: reflexive particle), ur vamm fat 'a mother overcome with fatigue'
b. *en em plojenniñ, *ur vamm pat

Thus, (9) cannot be adopted in its present form, since it would incorrectly

convert the a examples in (10) and (11) to the corresponding b examples.

A proponent of the MR analysis could, however, react to this evidence with a counterargument: that at the stage at which rule (9) applies, the spirantized alternant of p is in some way distinguished from underlying f. Consider again the spirantization rule in (6a): by itself, (6a) predicts that the spirant alternant of p should be [ɸ]. This prediction could be overridden by adopting the redundancy rule in (12), which would automatically require f rather than [ɸ] as the spirant alternant of p; but suppose, on the other hand, that (12) were instead a low-level rule applying after (6a) to convert [ɸ] into f.

(12) $\begin{bmatrix} - \text{ son} \\ + \text{ cont} \\ + \text{ ant} \end{bmatrix} \rightarrow$ [+ stri] (cf. Willis (1982: 55))

Under this latter assumption, the failure of rule (9) to apply in the examples in (10) and (11) could then be easily accounted for by (i) restricting the application of rule (9) to segments marked [- stri], as in (9');

(9') $\begin{bmatrix} - \text{ son} \\ - \text{ stri} \\ + \text{ ant} \\ \alpha \text{ cor} \\ \alpha \text{ voi} \end{bmatrix} \rightarrow$ [- cont] / $\begin{bmatrix} + \text{ nas} \\ + \text{ ant} \\ \alpha \text{ cor} \end{bmatrix}$ # ____

(ii) ordering rule (9') after the spirantization rule (6a) but before the low-level rule (12); and (iii) assuming that underlying f is indeed [+ stri], as its spelling suggests.[2] According to this analysis, the expressions va fenn 'my head', em penn 'in my head', and em fri 'in my nose' would be derived as in (13).

(13)

Underlying form:	va penn	em penn	em fri
(6a):	va ɸenn	em ɸenn	--
(9'):	--	em penn	--
(12):	va fenn	--	--

This analysis depends (a) on the existence of a phonological distinction between [ɸ] and f at the stage at which (9') applies, and (b) on the subsequent, absolute neutralization of this distinction by rule (12). To my knowledge, however, there is no independent motivation for regarding (12) as anything other than a redundancy rule, incapable of interacting with other rules as though it were itself an ordered rule; thus, in any reasonably concrete approach to phonology, the proposed revision of the MR analysis would have little to recommend it over the PM analysis.

One could, in fact, imagine a sort of compromise between the PM and MR analyses which would provide a superior account of the incomplete spirantization triggered by 'm, and would do so without recourse to rule (9'). In this analysis, 'm would still be regarded as an ordinary spirantization trigger, but the applicability of this mutation would be subject to the following anti-dissimilation condition in those dialects showing the mutation pattern in (3):

(14) A mutation rule has no effect if it would cause a [- son, + ant, α cor, α voi] segment to become [+ cont] after a [+ nas, + ant, α cor] segment.

Under this analysis, 'm would be treated as a spirantization trigger on a par with va 'my'; unlike va, however, 'm would be incapable of spirantizing p in those dialects subject to restriction (14). This account (which I shall call the conditional mutation (or CM) analysis) is superior to the revised MR analysis in that it doesn't entail the postulation of any absolutely neutralized phonological distinctions, nor does it require one to view (12) as anything other than a redundancy rule; and the fact that underlying initial f remains unaffected when preceded by 'm follows, in the CM analysis, from the simple fact that fricatives aren't mutable consonants in Breton.

The CM analysis might appear to be indistinguishable in its predictions from the PM analysis, at least as far as the spirantizing properties of 'm are concerned; there is one important difference, however. As mentioned above, spirantization of p after 'm is optional in some dialects of Breton; in Vannetais, for example, both (15a) and (15b) are possible:

(15) a. ean em prenas
he bought (e (verbal particle) + 'm → em)
'he bought (for) me'

b. ean em frenas (Guillevic & Le Goff (1912: 8))

This optionality is easily accounted for under the assumptions of the CM analysis: one can simply regard (14) as an optional tendency (rather than an absolute restriction) in Vannetais and similar dialects. In the PM analysis schematized in (6b), on the other hand, it is not clear how the optionality exemplified in (15) might be accounted for. Perhaps one could assume that 'm may function alternatively as a full-fledged spirantization trigger or as a trigger of partial spirantization; I know of no indisputable precedent, however, for such free variation in the properties of mutation triggers.[3]

To summarize: three different approaches to the incomplete mutation produced by 'm have been examined in this section. The success of the MR analysis hinges on the validity of the phonological rule (9'); maintaining this rule, however, entails the postulation of an absolutely neutralized distinction between f and [ɸ] in Breton—a distinction which might be rejected on metatheoretical grounds. The PM analysis, embodied by rule (6b), provides no ready account of the fact that in some dialects, initial p may optionally appear in its spirant form after the spirantization trigger 'm. The CM analysis, like the MR analysis, makes no use of partial mutation rules such as (6b); but by employing (14) as a phonological condition on the application of full mutation rules such as (6a), the CM analysis avoids the metatheoretical objections to the MR analysis, and also provides a natural means of accounting for the optional spirantization of p after 'm in certain dialects. I therefore conclude that the CM analysis provides a superior account of the incomplete pattern of spirantization exemplified in (3).

In the following section, I shall present some additional evidence against the revised MR analysis; in particular, I shall argue that the pattern of incomplete lenition in (4) cannot be the effect of mutation reversal.

4. A second problem for the MR analysis: optional lenition of d after n

The revised MR analysis developed above predicts (I) that the spirantization of p is uniformly reversed after spirantization triggers ending with m; and (II) that the lenition of d is uniformly reversed after lenition triggers ending with n. The attractiveness of the revised MR analysis therefore hinges on whether or not these predictions are actually confirmed. Prediction (I) is confirmed, but only trivially so, given that the first person singular clitic pronoun 'm is the only spirantization trigger which ends with m (except in Trégorrois; vide infra). Prediction (II), on the other hand, is actually disconfirmed, as I shall now show.

In most dialects of Breton, there are three kinds of lenition triggers which end with n:[4] (a) the articles an 'the', un 'a'; (b) the preposition dindan 'under'; and (c) FS/MPH nouns ending with n.[5] According to prediction (II) above, the lenition of d should be uniformly reversed after all of the lenition triggers in (a)-(c). It is universally true in Breton that initial d never surfaces as z when preceded by an article; but both within and across dialects of Breton, there is considerable variation in the behavior of initial d when it is preceded by the lenition triggers in (b) and (c).

Consider, for example, the preposition dindan. Kervella (1947: 85), a native of northwestern Cornouaille, asserts that d may optionally appear in its lenited form after dindan, as in (16b).

(16) a. dek 'ten' b. dindan zek devezh 'in ten days'

Hemon (1975b: 12-14), a native of Brest (in the dialect region of Léon), observes that dindan may sometimes fail to produce any lenition--whether of d or of any other consonant--but classifies it among the lenition triggers which may convert d to z rather than among those which leave d unaffected; cf. also Vallée (1926: 101; 102, fn 2). Thus, in those dialects in which dindan acts as a lenition trigger,[6] it doesn't affect initial d in the same way as the articles do: in all such dialects, dindan may lenite d to z in at least some circumstances.

Now consider lenition triggers of type (c)--FS/MPH nouns ending with n. According to Vallée (1926: 114), nouns of this sort lenite the initial d of a following modifier in the Léon dialect, as in (17b); Hemon (1975b: 17) regards the lenition of initial d by any sort of FS/MPH noun as optional in this dialect, but cites (18b) and (19b) as examples in which d is lenited to z after n. (I have standardized the spelling in these examples.)

(17) a. dall 'blind' b. al logodenn zall 'the blind mouse (= bat)'
(18) a. diaouloù 'devils' b. ur vandenn ziaouloù 'a crowd of devils'
(19) a. derv 'oak' b. ur c'hrizienn zerv 'the root of an oak'

Similarly, Trépos (n.d.[1968]: 37-38), a native of southwestern Cornouaille, cites the examples in (20b) and (21b):

(20) a. du 'black' b. un delienn zu 'a black leaf'
(21) a. dir 'steel' b. ur bluenn zir 'a steel pen'

Finally, Kervella (1947: 90-91) asserts that the lenition of initial d after a FS/MPH noun ending in n is optional in standard literary Breton.

In the Tréguier dialect, initial d is never lenited after a FS/MPH noun ending in n; this is, however, merely one reflection of the fact that initial d is never subject to lenition in this dialect--not even if it is preceded by a lenition trigger ending in a sound other than n (Hemon (1975b: 6), Jackson (1967: 313), Kervella (1947: 91), Le Roux (1896: 17)).[7] Thus, in those dialects in which postnominal adjectives are productively lenited by FS/MPH nouns and in which d is lenitable, FS/MPH nouns ending with n don't affect initial d in the same way as the articles do: in all such dialects, nouns of this sort may optionally lenite d to z.

Consider the possibilities which are open at this juncture. Certainly it cannot be maintained 'that the lenition of d is uniformly reversed after lenition triggers ending with n'; prediction (II) of the MR analysis is plainly disconfirmed, both by the leniting properties of dindan and by those of FS/MPH nouns ending with n. Whether a lenition trigger with a final n lenites a following initial d or leaves it unaffected thus depends not merely on the phonological context, but on the grammatical identity of the trigger; this being the case, the pattern of incomplete mutation in (4) cannot simply be viewed as the cumulative effect of the lenition rule (5a) and the phonological rule (9'). The revised MR analysis must therefore be rejected.

How, then, is the mutation pattern in (4) to be accounted for? More specifically, how can one account for the fact that in those dialects in which it is lenitable, initial d absolutely resists lenition when preceded by an article, but may optionally undergo lenition when preceded by any other lenition trigger ending with n?

Clearly the articles are somehow differentiated from the other lenition triggers ending with n. What distinguishes the articles, I suggest, is that they trigger the partial lenition in (5b); this accounts for their absolute failure to lenite d in any dialect of the language. On the other hand, I suggest that the remaining lenition triggers ending with n trigger the full set of lenitions in (5a), but are subject--optionally--to the phonological restriction (14) (except in Trégorrois, to which I return presently). Thus, my proposal is that the peculiar difference between the articles and the other n-final lenition triggers can best be accounted for by a combination of the PM analysis with the CM analysis: the former accounts for those cases in which the lenition of d after n is absolutely blocked (i.e. after the articles), while the latter provides for those cases in which this same lenition exists at least as an option (i.e. after other lenition triggers ending with n).

Let me note, in conclusion, that this mixed approach to the lenition of d after n provides a much more satisfying account of the peculiarities of Trégorrois than the MR analysis does. Recall that in the dialect of Tréguier, d never undergoes lenition under any circumstances. To account for this fact, one must assume that lenition is a narrower phenomenon in Trégorrois than in the other Breton dialects--that it is, in fact, identical in its effects to the 'partial lenition' represented in (5b). A proponent of the MR analysis would therefore have to assume that Trégorrois possesses a 'full lenition' rule distinct from any rule found in the other dialects (cf. Willis (1982: 156, fn 6)); and even though d is never lenited after the articles in any dialect of Breton, the proponent of the MR analysis would have to view this fact as the effect of different rules in different dialects--in Léonais, it would be viewed as the cumulative effect of lenition (rule (5a)) and mutation

reversal (rule (9')), while in Trégorrois, it would be viewed as an effect of the atrophied lenition rule (= (5b)) peculiar to that dialect.

The analysis proposed here affords a much more satisfying understanding of the dialect of Tréguier. In my analysis, the full lenition rule in Trégorrois is identical to the partial lenition rule proposed for the other dialects; as a consequence, the former can be viewed as a straightforward analogical development from the latter (Jackson (1967: 313), Le Roux (1896: 17)). Moreover, the fact that d is never lenited after the articles in any dialect receives a single, unified explanation in the analysis proposed here: this fact follows directly from the assumption that in all dialects, the articles trigger the pattern of lenitions in (5b).

Because d isn't lenitable in any context in Trégorrois, condition (14) is obviously irrelevant as a constraint on lenition in this dialect. As it turns out, it is irrelevant for spirantization as well. Recall first that in Trégorrois (unlike the other dialects), the enclitic 'm triggers the full range of spirantizations, even that of p to f. In addition, Trégorrois (again unlike the other dialects) possesses a second spirantization trigger ending with m, namely the possessive pronoun hom 'our' (Le Roux (1896: 9-10), Trépos (n.d.[1968]: 46)); this, too, triggers the full range of spirantizations. Accordingly, condition (14) is simply irrelevant for the analysis of incomplete mutations in Trégorrois. Thus, while I have proposed a mixed PM/CM analysis for most Breton dialects, it appears to be most appropriate to account for all incomplete lenitions in the dialect of Tréguier by means of the PM approach.

Notes

1. Note that the Breton articles are subject to the following phonologically conditioned alternation: un, an appear before initial n, d, t, h, or an initial vowel; ul, al appear before initial l; and ur, ar appear elsewhere.

2. In fact, graphic f,v represent bilabial (hence [- strid]) fricatives in at least some dialects of Breton; cf. Hemon (1975a: 84). In order to adapt the MR analysis to these dialects, each of (6a), (9'), and (12) would have to be reformulated in some way.

3. There are, of course, expressions that may trigger different mutations in complementary contexts; e.g. the articles, which trigger an incomplete lenition in a following FS/MPH noun (as in (4)), but trigger the incomplete spirantization of k to c'h in a following noun not belonging to the FS/MPH class. This is very different from a situation in which a particular word could freely trigger either of two different mutations in the same context.

4. For brevity's sake, I am excluding from consideration those instances of lenition occurring in the internal morphology of words, as, for example, in compounds; note, however, that the lenition of d after n is not unusual in such combinations: kornzigor 'ajar' (← korn 'corner' + digor 'open'); dindan-zouar 'underground' (← dindan 'under' + douar 'earth'); kenziskibl 'classmate' (← ken- (expresses association) + diskibl 'pupil').

5. According to the discussion in Guillevic & Le Goff (1912), the Vannes dialect does not possess a lenition trigger of type (b): in this dialect, the preposition dindan 'under' appears as edan, and does not produce any sort of mutation. Moreover, only a handful of frequently used adjectives undergo lenition after FS/MPH nouns in the Vannes dialect, and as it happens, none of these adjectives begins with d. Thus, as far as this dialect is concerned, prediction (II) is borne out, but again, only trivially, since the articles are the only lenition triggers which end with n and can precede an initial lenitable d.

6. To judge from the discussion in Le Clerc (1911) and Le Roux (1896), dindan never functions as a lenition trigger in the dialect of Tréguier; cf. also footnote 5.

7. Apparently d did at one time undergo lenition in Trégorrois; early in this century, in fact, Le Clerc (1911: 17, 21f) still classified the lenition of d as an option in certain circumstances.

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